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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,373	07/07/2003	Atsushi Kato	075834.00411	7415
33448 7590 01/08/2007 ROBERT J. DEPKE LEWIS T. STEADMAN ROCKEY, DEPKE, LYONS AND KITZINGER, LLC SUITE 5450 SEARS TOWER CHICAGO, IL 60606-6306			EXAMINER BERNATZ, KEVIN M	
			ART UNIT 1773	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/08/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/614,373

Applicant(s)

KATO, ATSUSHI

Examiner

Kevin M. Bernatz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Response to Amendment

1. Amendments to claim 1, filed on September 20, 2006, have been entered in the above-identified application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Examiner's Comment

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a

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question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation "does not contain a halogen containing resin", and the claim also recites "does not contain a vinyl group" which is the narrower statement of the range/limitation (i.e. resins containing a vinyl group is a subset of halogen containing resins, and hence is already encompassed by the broad recitation).

Request for Continued Examination

5. The Request for Continued Examination (RCE) under 37 CFR 1.53 (d) filed on September 20, 2006 is acceptable and a RCE has been established. An action on the RCE follows.

Claim Rejections - 35 USC § 103

6. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abe et al. (U.S. Patent No. 5,451,464) or Murayama (U.S. Patent No. 5,972,515) in view of Kato (U.S. Patent No. 6,114,057) and Kato (JP 2002-025035 A) for the reasons of record as set forth in Paragraph No. 3 of the Office Action mailed June 20, 2006.

Regarding the amended language of claim 1, the Examiner notes that both Abe et al. and Murayama disclose embodiments utilizing binders that do not contain a vinyl

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group and do not contain a halogen containing resin (*Abe et al.*: col. 4, lines 54 – 56 and examples: i.e. 100% polyurethane with no halogen groups; Murayama: col. 3, line 66 bridging col. 4, line 15 and examples – including a specific teaching that a polyurethane + polyurethane mixture is better than a polyurethane + vinyl polymer mixture).

Response to Arguments

7. The rejection of claim 1 under 35 U.S.C § 103(a) – Abe et al. or Murayama in view of Kato et al. and Kato

Applicant(s) argue(s) that “each of Kurose, and Kato ('057 and '035) references cited by the Examiner teaches the inclusion of a vinyl group or a halogen containing resin, and therefore teaches away from Applicant's currently claimed invention” (*page 5 of response*), further arguing that it would be improper to combine references that teach away from each other (*ibid*). The Examiner respectfully disagrees.

With regard to the rejections predicated on Abe et al. and Murayama, the Examiner notes that both base references explicitly teach using binders that do not contain a vinyl group or a halogen, and even explicitly teach the benefit of such a structure over the use of a mixture including a halogen containing resin (*see Paragraph 6, above*). Both Kato references are only relied upon to teach the knowledge in the art regarding the use of either an aromatic polyurethane formed from an aromatic diisocyanate or a polyester polyurethane having rigid chains. Both of which are used to raise the glass temperature (T_g) of the polyurethane. The Examiner notes that both Abe et al. (*in the Abstract*) and Murayama (*at col. 5, lines 15 – 22 and col. 6, lines 16 –*

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24) teach controlling the Tg of the two polyurethanes which exclusively make up the disclosed binders. As such, the Examiner does not find Applicant's argument that the references teach away from each other as persuasive, since the Kato references are merely relied upon to teach the selection of the polyurethanes for use in optimizing the Tg's. Optimization that is required in both the Abe et al. and Murayama references.

Applicant further argues that the Kato '057 reference "fails to teach or suggest the use of an aromatic polyester polyurethane resin obtained by urethanization of an aromatic polyester with an aromatic di-isocyanate", arguing that the reference only discloses the use of an aromatic di-isocyanate and not both an aromatic polyester and an aromatic di-isocyanate (*page 5 of response*). The Examiner respectfully disagrees.

First, the Examiner notes that the limitation "obtained by urethanization of an aromatic polyester with an aromatic di-isocyanate" is a process limitation(s) and is/are not further limiting in terms of the structure resulting from the claimed process. Specifically, in a product claim, as long as the prior art product meets the claimed structural limitations, the method by which the product is formed is not germane to the determination of patentability of the product unless an unobvious difference can be shown to result from the claimed process limitations. In the instant case, the final structure is a polyester polyurethane containing aromatic groups, which is met by using aromatic groups in one or both of the polyester or the di-isocyanate. However, the Examiner further notes that Kato '057 explicitly disclose polyesters containing aromatic groups (*col. 3, line 62 bridging col. 4, line 7: e.g. terephthalic acid, which is the building block of the aromatic polyester polyethyleneterephthalate, PET*).

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8. The rejection of claim 1 under 35 U.S.C § 103(a) – Kurose et al. in view of Kato et al. and Kato

The above noted rejection has been withdrawn because applicant(s) amendment(s) have set forth new limitations (e.g. "said binder does not contain a vinyl group and does not contain a halogen containing resin") no longer anticipated, nor rendered obvious, by the above noted rejection.

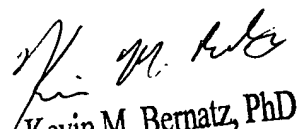
Conclusion

9. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Kevin M Bernatz whose telephone number is (571) 272-1505. The Examiner can normally be reached on M-F, 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KMB
December 5, 2006


Kevin M. Bernatz, PhD
Primary Examiner